

What is claimed is:

1. A method for operating an electrical machine (1) for the output of electrical power (12) comprising an excitation winding (2) and a stator winding (4), after which a converter configuration (6) is located, wherein, in the range of an idle speed of an internal combustion engine, the output of electrical power (12) takes place along the torque line (29) independently of the number of coils  $w_1$ ,  $w_2$  and, in the upper speed range on the other side of the idle speed of an internal combustion engine, the output of electrical power (12) takes place via an electrical machine (1) having a stator winding (4) comprising a small number of coils  $w_2$ .

2. The method according to Claim 1, wherein the voltage difference between vehicle electrical system (10) of the motor vehicle and the machine terminals (5) is compensated for by means of a pulse-width modulation inverter (6).

3. The method according to Claim 1, wherein, in the idle speed range of an internal combustion engine, the power output (12) of the electrical machine (1) takes place via the pulse-width modulation inverter configuration (6).

4. The method according to Claim 1, wherein the pulse-width modulation inverter (6) processes a current that is inversely proportional to the number of coils of the stator winding (4) of the electrical machine (1).

5. The method according to Claim 1, wherein the output of electrical power (12) above the idle speed range takes place according to the power curve (24) of an electrical machine (1) having a small number of coils  $w_2$ .

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2 6. The method according to Claim 1,  
3 wherein, by operating the electrical machine (1) using a pulse-width modulation  
4 inverter (6), the number of stator windings can be selected independently of the  
5 inception speed (25.1, 25.2).

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7 7. The method according to Claim 1,  
8 wherein, in the lower speed range, the output of electrical power (12) takes place  
9 almost up to its maximum value (27) according to the torque line (29) via the  
10 pulse-width modulation inverter (6).

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12 8. The method according to Claim 1,  
13 wherein the average efficiency of the electrical machine (1) is increased by  
14 outfitting the electrical machine (1) with a smaller number of coils  $w_2$ .

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